

1-10-01 15 JAN 2002

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Miguel MARAÑON MARQUINA )  
Serial No.: 09/914,902 )  
Filed: September 4, 2001 )  
For: Mechanism For Regulating )  
Collapsible Elements )  
Docket No.: 7927/83649 )

PRELIMINARY AMENDMENT

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Subsequent to our Preliminary Amendment filed on September 4, 2001, we wish to further amend the above-identified application as follows:

In the specification:

Please change the title from "CONTROL MECHANISM FOR RETRACTABLE ELEMENTS" (the title of International Application No. PCT/ES01/00011) -- to -- MECHANISM FOR REGULATING COLLAPSIBLE ELEMENTS--, (the title of the above-identified application which claims priority of the aforementioned International application). We inadvertently failed to incorporate this amendment into our Preliminary Amendment that accompanied the above-identified application to the Patent Office filed on September 4, 2001.

In the abstract:

Please change the title of the heading "Abstract" to read --Abstract of the Disclosure--.

U.S. Pat. Appln. Ser. No. 09/914,902  
Filed September 4, 2001

Entry of this amendment is courteously solicited.

Respectfully submitted,

WELSH & KATZ, LTD.

By Bryan C. Wallace

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312/655-1500

83649

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re U.S. Patent Application )  
Applicant: MARAÑON MARQUINA, Miguel )  
Serial No.: Not Yet Assigned )  
Filed: Herewith )  
For: MECHANISM FOR )  
REGULATING COLLAPSIBLE )  
ELEMENTS )

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

This is a Preliminary Amendment for entry in the above-identified application.

In the Specification:

Please add the attached Abstract to the specification.

In the Claims:

Please amend the claims as follows:

1. (amended) Mechanism for adjustment of hinged elements that planned to be applicable in the angular adjustment of a movable or hinged item with respect to a fixed structure or item, such as could be the armrests or a car, distinctive because it is essentially formed by two discoidal parts mounted on a common axle, the parts each being equipped with opposing cogs that tend to engage permanently with each other; being intended that the discoidal

part acts as a crown and is welded to the structure or fixed item in which it is applied, while the discoidal part acts as a ratchet and is positioned on the axle with ability to move axially, between limits set by a limit plate positioned on the axle and an external limit disk that in turn forms a support for a spring that tends to continuously push the discoidal part acting as a ratchet against the discoidal part acting as a crown; furthermore with the distinction that between the ratchet and crown a controlling part of a separator that allows the disengaging of the cogs of the ratchet and crown to permit the tilting of the hinged part in the opposite sense to folding.

2. (amended) Mechanism of adjustment of hinged elements, according to claim 1, wherein the discoidal part acting as a ratchet has a controlling section of a reduced area in which the part acting as separator is capable of lodging and to keep the teeth of the ratchet and crown separate; being planned that this separator be externally guided over the crown and pushed continuously by a spring.

3. (amended) Mechanism of adjustment of hinged elements, according to claim 1, wherein the cogs of the ratchet and crown are located on a sector of the perimeter of the opposing faces of both parts.

4. (amended) Mechanism of adjustment of hinged parts, according to claim 1, wherein the ratchet and crown have cogs on all the perimeter of the opposing faces of these parts, while the separator is formed from a piece styled like a ring with projections that lodge

in windows set up for this purpose in the crown, this separator being associated with an external control in the shape of a wedge of manual operation.

5. (amended) Mechanism of adjustment of hinged parts, according to claim 1, wherein the ratchet and the crown have cogs on all the perimeter contour of the opposing faces of these parts and are supplemented by a separator formed by a ring with a pair of side and external arms in diametrical opposition, each equipped with axial projections that move in corresponding grooves or slots set up for this purpose in the ratchet, while the arms are positioned in complementary housings set up in the crown, all so that the rotation of the ratchet during the adjustment phase permits the separator to remain immobile, establishing the different positions between the ratchet and the crown the different portions of folding or adjustment of the mechanism, keeping this position until the projections of the separator limit against one of the ends of the grooves or slots of the ratchet, which causes the dragging of the separator and with it its angular displacement that will cause the respective push and corresponding axial movement of the ratchet with respect to the crown, the separation therefore between both parts being produced that will allow the resetting of the mechanism.

6. (amended) Mechanism of adjustment of hinged elements, according to claim 5, wherein, the housings of the crown has one of its walls ramped that ends in a flat section with a step from which another flat section is set out at a higher level than the flat section, so that the rotation of the separator will cause its ascent along the ramp until reaching the flat section,

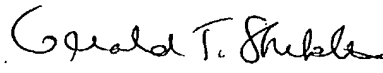
this axial movement of the separator thus causing an axial movement of the ratchet with respect to the crown and the disengaging of both parts.

7. (amended) Mechanism of adjustment of hinged elements, according to claim 5 wherein the end or exit of the ramped walls of the housings corresponding to the crown have a small separator retention elevation during the resetting of the mechanism preventing the friction effect between ratchet and separator referred to.

8. (amended) Mechanism of adjustment of hinged elements, according to, wherein the discoidal part, that act as a ratchet, can be mounted on the fixed item and the discoidal part, that acts as crown, can be mounted on the hinged part.

Respectfully submitted,

**WELSH & KATZ, LTD.**

By 

Gerald T. Shekleton

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Dated: September 4, 2001

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (amended) Mechanism for adjustment of hinged elements that planned to be applicable in the angular adjustment of a movable or hinged item with respect to a fixed structure or item, such as could be the armrests or a car, distinctive because it is essentially formed by two discoidal parts [(1-1"-1'") and (2-2"-2'") preferably discoidal and] mounted on a common axle [(3)], the parts [(1-1"-1'") and (2-2"-2'")] each being equipped with opposing cogs [(4)] that tend to engage permanently with each other; being intended that the discoidal part [(2-2"-2'")] acts as a crown and is welded to the structure or fixed item in which it is applied, while the discoidal part [(1-1"-1'")] acts as a ratchet and is positioned on the axle [(3)] with ability to move axially, between limits set by a limit plate [(6)] positioned on the axle [(3)] and an external limit disk [(7)] that in turn forms a support for a spring [(8)] that tends to continuously push the discoidal part acting as a ratchet [(1-1"-1'")] against the discoidal part acting as a crown [(2-2"-2'")]; furthermore with the distinction that between the ratchet and crown a controlling part [(9-9"-9'")] of a separator that allows the disengaging of the cogs [(4)] of the ratchet and crown to permit the tilting of the hinged part in the opposite sense to folding.

2. (amended) Mechanism of adjustment of hinged elements, according to claim 1, [characterised in that] wherein the discoidal part acting as a ratchet [(1)] has a controlling section of a reduced area [(5)] in which the part acting as separator is capable of lodging [(9)] and to keep the teeth [(4)] of the ratchet [(1)] and crown [(2)] separate; being planned that this separator [(9)] be externally guided over the crown and pushed continuously by a spring [(10)].

3. (amended) Mechanism of adjustment of hinged elements, according to claim 1, wherein [previous claims, characterised in that] the cogs [(4)] of the ratchet [(1)] and crown [(2)] are located on a sector of the perimeter of the opposing faces of both parts.

4. (amended) Mechanism of adjustment of hinged parts, according to claim 1, wherein [characterised in that] the ratchet [(1'')] and crown [(2'')] have cogs [(4'')] on all the perimeter of the opposing faces of these parts, while the separator [(9'')] is formed from a piece styled like a ring with projections [(14)] that lodge in windows [(13)] set up for this purpose in the crown [(2'')], this separator [(9'')] being associated with an external control in the shape of a wedge [(15)] of manual operation.

5. (amended) Mechanism of adjustment of hinged parts, according to claim 1, wherein [characterised in that] the ratchet [(1''')] and the crown [(2''')] have cogs [(4)] on all the perimeter contour of the opposing faces of these parts and are supplemented by a separator [(9''')] formed by a ring with a pair of side and external arms [(16)] in diametrical opposition, each equipped with axial projections [(17)] that move in corresponding grooves or slots [(26)] set up for this purpose in the ratchet [(1''')], while the arms [(16)] are positioned in complementary housings [(18)] set up in the crown [(2''')], all so that the rotation of the ratchet [(1''')] during the adjustment phase permits the separator [(9''')] to remain immobile, establishing the different positions between the ratchet [(1'')] and the crown [(2'')] the different portions of folding or adjustment of the mechanism, keeping this position until the projections [(17)] of the separator limit against one of the ends of the grooves or slots [(23)] of the ratchet



[(1'')], which causes the dragging of the separator [(9'')] and with it its angular displacement that will cause the respective push and corresponding axial movement of the ratchet [(1'')] with respect to the crown [(2'')], the separation therefore between both parts being produced that will allow the resetting of the mechanism.

6. (amended) Mechanism of adjustment of hinged elements, according to claim 5, [characterised in that] wherein, the housings [(18)] of the crown [(2'')] has one of its walls ramped [(19)] that ends in a flat section [(21)] with a step [(22)] from which another flat section is set out [(21'')] at a higher level than the flat section [(21)], so that the rotation of the separator [(9'')] will cause its ascent along the ramp [(19)] until reaching the flat section [(21)], this axial movement of the separator [(9'')] thus causing an axial movement of the ratchet [(1'')] with respect to the crown [(2'')] and the disengaging of both parts.

7. (amended) Mechanism of adjustment of hinged elements, according to claim[s] 5 [and 6, characterised in that] wherein the end or exit of the ramped walls [(19)] of the housings [(18)] corresponding to the crown [(2'')] have a small separator [(9'')] retention elevation [(20)] during the resetting of the mechanism preventing the friction effect between ratchet [(1'')] and separator [(9'')] referred to.

8. (amended) Mechanism of adjustment of hinged elements, according to [previous claims, characterised in that], wherein the discoidal part [(1-1''-1'')], that act as a ratchet, can

be mounted on the fixed item and the discoidal part [(2-2"-2'')], that acts as crown, can be mounted on the hinged part.

2025-01-01

## ABSTRACT

The mechanism includes two discoidal parts and mounted on an unattached axle, these parts and being equipped on each of their opposing faces with cogged sections, that constantly engage each other. The part is set up as a ratchet that is mounted on the movable or hinged item, while the part forms a crown and is solidly mounted on the fixed structure in which this mechanism is applied. The positioning of the ratchet on the axle allows it to move axially to facilitate the separation of the teeth and permit the tilting of the movable item in the unfolding or resetting sense of the mechanism. The separation of the teeth is carried out by a separator element that is set up between the ratchet and crown, the ratchet being able to act automatically in the rotation of the ratchet with respect to the crown or to be manually operated to carry out the separation. The ratchet is required to activate the position of engagement with the crown by means of a spring that is supported by and external disk that in turn presses on a limit plate pierced by the axle and mounted on the ratchet.